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NORMAN CARTER FASSETT 1900-1954

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IN each generation there are certain people (just a few in a million), who are born botanists. One such was Norman Carter Fassett, whose death on September 14, 1954, at Boothbay Harbor, Maine, is a loss to his science as to his friends. A member of the New England Botanical Club since 1920, he was at the time of his death President of the American Society of Plant Taxonomists, and a full professor of botany in the University of Wisconsin. But these and many other professional connections, activities, and achievements, do not begin to suggest the depth of his feeling for his science. It is not too much to say that the great love of his life was the flora of his native land.

To be a born botanist, as Fassett was, is not the same thing as being a born gardener. The most ardent gardeners I have known are preoccupied with making plants grow where, and as, they do not seem naturally inclined to grow; your real gardener wants to bring every plant that appears in his eyes worthy of the honor into cultivation, and to improve upon it. I could never discover that my friend Fassett had the gardener's gift. He loved plants as he found them, and where he found them, and looked with some distaste upon plants out of place. The planting of thousands of Colorado blue spruce on Mt. Washington, New Hampshire, was proudly announced at a meeting of the New England Botanical Club in 1921, and I distinctly recollect how this left my friend not cold but hot under the collar.

Nor was he one of the type that I shall venture to call the "made" botanist. By that I mean one who at some time in his college training or even later decides to turn upon plants an

intellect that would have been equally happy, perhaps, in physics, chemistry or even mathematics. This group includes, I know, some of the greatest names in botany today. And it is with no intention to belittle their achievements that I say that to those of this persuasion whom I have known, a living plant, *in situ*, may mean comparatively little. It must be brought into the laboratory and "controlled" before it yields up any intellectual satisfactions for the "made" botanist. It is hard to believe that plants could ever have for such botanists any emotional content.

A sentence from a letter which he wrote me in 1921 will show how different was Fassett's approach, even in these early days. "I have fallen in love this summer," he wrote in 1921, "with the three Osmundas." I can imagine a similar sentence (indeed there is one) dropping from the pen of the young Linnaeus, the young Theophrastus, the young Haller (poet-botanist of the flora of the Alps), William Hooker or Konrad Sprengel—all of them born botanists. I cannot conceive that a Nägeli, an Ingen-Housz, a Correns, a von Mohl, or a Weissmann, would ever have fallen in love with a genus of ferns, or if such a weakness had overcome them in early youth, it would never have been admitted in writing!

Norman Carter Fassett was born March 27, 1900 in Ware, Massachusetts. When I first knew him, however, he was living with his delightful family in Leominster, and together we used to tramp the autumn woods thereabouts and the frozen bogs in winter, and fish from the same stream in May. But Norman's real love was for Maine, where his mother had been born and where the Fassett family had a summer home, at Ocean Point. When I visited him there he showed me, as one reveals a holy object, a spot particularly beloved by him—a tunnel-like, moss-grown path through a grove of spruce all hung with *Usnea* lichen. He felt too deeply about it to speak; he simply stood aside and revealed it to me, with his light blue eyes shining. We looked at each other as two who share a common Faith, and nodded in unspoken understanding.

We first met, as mates of the class of '22 at Harvard, on the opening day of Fernald's famous Botany 7 course, in the autumn of 1919. It was always a very small class; probably few ever took it except those who had already heard of it, and knew it was

unlike any other botanical course elsewhere offered. Yet all the others in that particular class have faded from my memory. Only Norman remains clear to me. One might say I remember him because none of the rest of us was destined to go so far in this branch of botany as he. But he had a quiet yet intense enthusiasm, a shy but strong personality that no one could forget.

Fassett as a nineteen-year-old was indeed a shy person—but shy not from a fear that you would not notice him, but from genuine modesty. He told me that (so he fancied) he always made a poor first impression. All that amounted to was that he was decidedly not a born actor. He did not project his personality; his pawky humor and his steady loyalty to friends gradually dawned on you. And it might take you some time to realize how well he knew what he knew. Rather slight in frame, he even entered a room more unobtrusively than anyone of force and importance I have ever known.

In our last two years at Harvard we were roommates and went constantly about together. In this period I came to understand how much he owed to the New England or Thoreauvian tradition. I don't mean that he had ever, at that time, read a word of the Sage of Walden, still less that he was a Transcendentalist or moralist. Rather do I mean that the same attitude taught both men to love New England bogs just because they are so acid, and the family of the sedges because they are, botanically, so tough. Each liked a wrestle with Nature—liked to show that he could start a fire with wet wood and “preferred snow on his wildflowers,” as Norman put it to me when I was trying to extol the beauties of a Carolina spring.

Norman had also—at this time but not in later years—the limitations of a sweetly provincial training. His knowledge of fiction seemed to stop with Dickens, and of poetry, with Longfellow. (I introduced him literally to Vachel Lindsay and literarily to Omar.) The higher music he left to his brother Jimmy—now James Fassett the distinguished radio music commentator for the New York Philharmonic Orchestra. But Norman had a fund of comic songs which I have never heard from anyone else, and “Pinafore” was his favorite (and only) opera.

Languages were a devilment to my friend, not I think because

of inability but because there seemed to him no good reason for learning to say something as foreigners say it when he could say it perfectly well in English. (I dragged him through his second try at first-year German—a case of the blind leading the blind.)

It was with difficulty that I persuaded him to climb Mt. Washington with me. Mountains, in his philosophy at the time, were rather excessive phenomena not to be given overt approval by one to whom the coast of Maine was the last word in God's good creation. In vain I tried to get him to botanize the southern Appalachians with me. And Fassett had then the perfectly formed conception of the Middle West commonly and firmly held by people who have never been there. Wisconsin—where he was to spend so much of his life and do so much fine work—was, I distinctly recollect, the prime object of his half-humorous scorn. That I had been there and he hadn't merely proved the folly and delusion of travel. (One must reread Thoreau's remarks on the futility of Emerson's trip to Europe, and the superiority of Concord woods over the California redwoods, to understand that my friend was not being a young eccentric but was actually conforming to the conventions of his environment.)

After Botany 7 had come to an end, Fernald urged his students to collect during the summer and he generally referred them to some special problem of interest to him which could best be solved by collecting in the student's "home region." He sent me off, for instance, to my native haunts—the head of Lake Michigan, to look for the coastal plain element in the flora of the Great Lakes, and dispatched Fassett to his beloved Maine, to collect the estuary plants.

This was a promising subject—the aquatic flora of a region that is part brackish, part fresh, and may be expected to give shelter to long littoral extensions of ranges. But collecting plants on mud flats is not light or delightful work. It is extremely toilsome, sticky, mucky, hot (or cold), and smelly. It was a long wearisome summer that the young man put in, as his letters to me revealed, and he was often lonely. For this was not the Maine coast of surf and rocks, of the odor of spruce and the taste of lobster, that he loved. His brother James dropped in to see Norman and looked out in horror over the muddy waste which Norman was preparing at that moment to cross. "Are you going

out *there*?" Jimmy demanded, aghast. "Have to," Norman answered. "You're crazy!" cried Jimmy wildly. Still, not lacking in courage, James followed his brother out on the queazy mass, half liquid, half solid, and helped him collect plants. I believe James never went out a second time, but Norman fought it out along these lines—like General Grant. And it did take all summer.

Estuarine plants do not make a showy collection in an herbarium. It seemed to me, as I reviewed the results of his summer toil, that they were all minute apetalous flowers (or capsules) sessile in the axils of opposite leaves—and I said so. He agreed; he found their identification a tedious business, over which he was busied for a year. But he faced the fact that in science there is a great deal of tedium. Plugging steadily ahead, in following summers he extended his estuarine studies to the Gulf of St. Lawrence and the Maritime Provinces of Canada.

In our last undergraduate year, Fassett and I roomed together in Stoughton Hall and were graduated together, he with the degree of B.S., class of 1922. While I went off to a job in the Office of Foreign Seed and Plant Introduction in the Department of Agriculture in Washington, Fassett continued on at Harvard, teaching there and at Radcliffe from 1922 to 1924 and earning the degree of M.A. in 1923, while in 1925 he went through the ordeal (described to me by its victim in all its horrid details) of a successful Ph.D. degree. His thesis was published, after the usual delays so agonizing to young authors, in 1928 by the Boston Society of Natural History, *Proceedings* vol. 39, pages 73–130, and bore the title of "The Vegetation of the Estuaries of Northeastern North America." Such titles do not set the Seine, far less the Charles and the Mystic, on fire. Yet in the slow course of professorial time, this paper *was* noticed, and with increasing respect, so that he was called upon to make surveys of the aquatic vegetation first of Wisconsin and in later years of Central America, until he became perhaps the country's leading authority on the subject.

In the meantime he had been appointed, in 1925, to an instructorship in botany at the University of Wisconsin. Madison, he reported, was to his (feigned) astonishment quite a delightful place, "almost a New England town." Chicago, where I showed

him around for the first time, amazed him. With a twinkle in his blue eyes he remarked that "the place is undoubtedly growing." The Wisconsin North Woods, he wrote, had the "right kind of trees,"—spruces, birches, white and red pines. His first classes did not interest him, he wrote me. After all, who cares to go over the same old ground of elementary plant physiology, and photosynthesis, and the conjugation of *Spirogyra*?

His rise at Wisconsin was rapid, however; he was Assistant Professor by 1929, Associate Professor in 1937, and full Professor and Curator of the Herbarium in 1944. "Under his guidance," say his colleagues, in *Memorial Resolutions . . . , on the Death of Professor Norman Carter Fassett*, "the Herbarium of the University has grown from a collection of 96,000 specimens, including 15,000 specimens of Wisconsin plants, to the impressive and exceedingly valuable collection of 380,000 specimens, including 68,000 specimens in the Wisconsin collection. The specimens personally collected by him number 28,000."

It is only fitting that his colleagues at Wisconsin should speak for him and his nearly 30 years of brilliant work at Madison, and so I shall take the liberty of quoting further from their admirable testimonial. "Dr. Fassett's profound enthusiasm for the out-of-doors and his sensitive dismay at the changes being wrought by man led him to become one of the leaders of conservation thought in Wisconsin. Although not a writer in the field, his lectures and his conversations with his students and colleagues imbued many with the spirit of conservation. Through his influence an undergraduate major in the biological aspects of conservation was started at the University and the state board for the preservation of scientific areas was brought into being. He was active in the establishment and development of the University Arboretum. His wide influence upon the students from so many diverse fields impressed many of the citizens of Wisconsin with the importance of an ecological conscience. No student ever left his classes without an increased perception of America's magnificent natural resources, the sweep of their evolution in the past, their significance and beauty in the present, and our own responsibility for their full enjoyment by the generations that are to follow us. These attitudes and ideas spread into many departments of the University and far beyond it. . . .

“A forceful and stimulating personality, Dr. Fassett was noted for the excellence of his lectures. His classes were sought by students in many fields of science. Colleagues teaching in other departments paid him a rare tribute in asking him to give the opening lecture in one course and the final one in another. Sparkling wit, dry humor and a wealth of illustrative material characterized his delivery. No man ever did more to bring the salty air of the New England coast to a Midwestern campus. Abundant photographs taken on his many travels were used to illustrate points he wished to make. Always a firm believer in the necessity of field work in botany, Dr. Fassett led his classes on many memorable trips. Who among his students can forget their professor ‘swinging on the birches’ of the north slopes along the Wisconsin River valley, or his savory stews garnished with the local vegetation, along with many an important botanical precept.”

Four excellent books bear Fassett’s name. First there is his very concise and handy *Spring Flora of Wisconsin* (1931 reprinted in 1938), his *Leguminous Plants of Wisconsin* (1939) with its very carefully mapped ranges and excellent keys and lucid full descriptions and photographs far above the average of botanists’ attempts (they are usually pretty amateurish) at photography. Then in 1940 McGraw Hill published his *magnum opus*, *A Manual of Aquatic Plants*. With hundreds of excellent diagnostic drawing and 382 pages of text, it was made further useful by very full notes on the uses of aquatic vegetation by wildlife. His last work was *Grasses of Wisconsin* (1951), a model of clarity and conciseness, excellently illustrated and with many distributional maps.

During World War II Fassett was called upon, with other botanists, to make a search upon behalf of our armed forces fighting in malarial regions, to locate in its native countries new sources of *Cinchona*, the tree that yields quinine. The Japanese having seized the Dutch East Indies, the regular supply of quinine was cut off, and the suffering of our troops at Corregidor, from lack of quinine, are too well known to repeat. Fassett tells the story (omitting only his first agonies over the Spanish language) in the *25th Anniversary Report of Harvard Class of 1922*, and he tells it so well that I can only quote his own modest and humorous account of it as he gave it there:

“For me, the war’s interruption of normal routine took the form of a year’s sojourn in Colombia, South America, where I explored the Andes for *Cinchona*, the tree whose bark yields quinine. The life we led in the Cinchona Mission was well described in a recent issue of the *National Geographic* on the Cinchona mission in Ecuador (which failed to state that more *Cinchona* bark was shipped from Colombia than from all the rest of South America combined).

“The story is this: *Cinchona* is found in the wild state only in the high mountain areas of South America, but for nearly a century the commercial supply has come from plantations (originally from South American seed) in Java and the Philippines. At just the time when need for quinine became most acute these sources became unavailable, so we had to go back to South America to tap the wild supply. But the trees in their native regions are unreliable. In one region they may have a high quinine content and in others be quite useless. So botanists were called for exploration, to locate the stands of trees and bring back samples for chemical analysis. There were about ten of us in Colombia. Each travelled with a Colombian boy for an assistant. We drove, over wild mountain roads overhanging eternity, to villages as remote as could be reached by automobile. The assistant hired guides and mules, and we climbed, usually to eight or nine thousand feet. When the going got too tough for the mules, we continued on foot, cutting trail with machetes and often climbing almost vertically for half a day. Most of the time it rained. After locating a stand of *Cinchona*, we would cut a few trees and strip the bark and make herbarium specimens. If examination of the latter showed it to be the right species and analysis of the bark showed it to have satisfactory alkaloid content, word would be sent back that we would buy bark from that particular region. And that, my friends who were in the tropics, is how you got your quinine—unless you used atabrine!”

Fassett’s ever-growing reputation as a specialist on aquatic vegetation caused him to be called more than once to Central America to study the water plants of the tropics. On some of these trips he was accompanied by his adolescent son Charles who, to his great pride, has since followed in his botanical footsteps and is now on the botanical faculty of the University of

Wisconsin. It was in December of 1953, I believe, that he was suddenly stricken down, in Managua, Nicaragua, with a blow to his health. "Until that day," he wrote me in February, "I was just as active as the day we climbed Mt. Washington together." He was hospitalized there for some weeks before being returned to Madison, and there he was told that the lesion in the brain was a very mild one and would soon mend. But on February 21 he had another hemorrhage and the next day was hospitalized, almost dead. And here is the fine, fighting, sporting spirit in which he wrote me on July 18:

"The doctor said I might recover and walk again—you know how a poor old guy stumps along after a stroke. I now walk as well as ever, and yesterday I was climbing trees with a friend's children. On March 11 a tumor was removed just above the right ear. Five days later I staggered to my feet, grabbed a likely looking nurse, and polka'd down the corridor. Forgive my smarty boasting—I have to get what fun I can out of this. Since then I have been in and out of the hospital much of the time delirious or just plain unconscious. For a couple of weeks now I have been out of the hospital, and hard at work. The cancer is coming back, and I am given a few months to live. I am working hard to finish a number of jobs. Just completed a monograph of *Echinodorus*. Now am starting a report on my recent trip to Central America. I have a lot of papers under way, and want to leave them so somebody can pick them up. I fear I shall not get to the Spring Flora of New England. It is finished up into the Cruciferae. Think I shall send you a copy of the Monocots. Wish I could find somebody to finish it. What I plan (or hope) to do is get various persons to take on some of these papers, then leave the manuscript (if I have to leave it) with directions to have it sent to that person. Most of the monographs of Central American aquatics were written at the Gray Herbarium when I was there four years ago, and are just about in the state where Fernald published. That is: one must borrow material from the larger herbaria, work it up and make necessary changes, plot maps, cite specimens, etc. If you think of any likely candidates, let me know. Or, would make some nice theses, under proper direction.

"My eyesight is still very bad, with the left upper quarter of

the field of vision gone. Everything looks funny, and I feel as if a flash bulb had just gone off before my eyes. My hands tingle continuously. I get confused very easily. I am living with Marcia*, who is now married, on the edge of town, but still keep my apartment near the University. Ever since you introduced me to Omar, on the banks of the Charles, I have lived by his philosophy, and it has paid off. Now I eat well, sleep well, and enjoy my likker. Wonder how it will strike me at the end—will there be a general decay of faculties as the cancer progresses, or will I have a grand hemorrhage that really slaps me down?

“O. K. It’s been fun.”

My old friend spent a few very happy last weeks at Boothbay Harbor. Then he was taken to the hospital, unconscious, and lingered, without pain I believe and hope, until the fourteenth of September. He was much too young to go. Years of fruitful research and teaching, and many books, should still have come from his great gifts. His loss is a loss to science. As to his personal friends, they feel it too keenly to be able to speak of it.

CONTRIBUTIONS TO THE FLORA OF NOVA SCOTIA IV

E. C. SMITH AND J. S. ERSKINE

DURING the past few years rather extensive floristic surveys have been carried out in Nova Scotia sponsored mainly by the Nova Scotia Museum of Science and by the Nova Scotia Research Foundation. The former has been directed toward ecological studies of particular areas of the province and the building up of the herbarium of the sponsoring institution under the direction of J. S. Erskine. The latter survey has been conducted by E. C. Smith in connection with forest ecology studies. Some of the results of these surveys have already been published (Erskine, D. S. 1951; Erskine, J. S. 1953 and 1954; Smith and Schofield 1952; Schofield and Smith 1953). In the above and in the present paper, records of new plants for the province of particular interest have been the arctic-montane species reported mainly from northern Cape Breton Island which fill in range gaps from Newfoundland, New Brunswick, and New England.

* His daughter.